



Dart Aerospace Ltd.  
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Canada

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803818

**D412-705-015**  
**Job Sheet 178727**



**Part No:** D412-705-015

**Job Qty:** 1 ea

**Part Name:** Drive Shaft Tunnel Modification



**Part Weight:** 0 lbs

**Status:** Scheduled

**Priority:** Medium

**Job Created:** 6/6/18

**Job Tracking No:**

**Due Date:** 6/27/18

**Created By:** Marie Lajeunesse

**Type:** SOLD

**Description:**

**Note:** DWG REV A SHEET 19 IPP Rev:B Removed Manufacturing 06-10-03 JLM IPP Rev:C ECN 1052 07-11-05 DD verified by:EC IPP Rev:D ECN 12-670 12.11.07 DD Verified by:JLM IPP REV:E 16.10.05 NOW @ CHG006 DD VERF:JFS

**Ship Via:**

### Bill of Materials

JUN 12 2018

### Job Routing

| Op No | Operation          | Qty   | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |           | Sign-off         |
|-------|--------------------|-------|------------|----------|-----------|---------|-----------------------|-----------|------------------|
|       |                    |       |            |          | Setup hrs | Run Hrs | Workcenter / Supplier | Lead Time |                  |
| 90    | Start up Operation | 1 Ea  | 6/27/18    | 6/27/18  | 0.00      | 0.00    | Start Up Stores/Pkg-2 |           | JRB 6/12/2018    |
| 110   | Packaging          | 1 pcs | 6/27/18    | 6/27/18  | 0.00      | 0.00    | Packaging1-4          |           |                  |
| 120   | QC                 | 1 pcs | 6/27/18    | 6/27/18  | 0.00      | 0.00    | QC4                   |           | JRB DAS          |
| 130   | Packaging          | 1 pcs | 6/27/18    | 6/27/18  | 0.00      | 0.00    | Packaging3-2          |           | JRB 28           |
| 135   | DC                 | 1 pcs | 6/27/18    | 6/27/18  | 0.00      | 0.00    | DC                    |           | 21 9-89          |
| 140   | QC21-FG            | 1 Ea  | 6/27/18    | 6/27/18  | 0.00      | 0.00    | QC21                  |           | 9-89 JUN 22 2018 |

FG027

### Job BOM

| Part / Item | Component Name        | Quantity      | Operation             | Container    |
|-------------|-----------------------|---------------|-----------------------|--------------|
| AN3C3A      | Bolt                  | 22 Ea (22 ea) | 90-Start up Operation | 5019392      |
| AN3C4A      | Bolt                  | 3 Ea (3 ea)   | 90-Start up Operation | 5000533      |
| D3256-1     | Access Panel          | 1 Ea (1 ea)   | 90-Start up Operation | * 5064811    |
| D3256-3     | Gasket                | 1 Ea (1 ea)   | 90-Start up Operation | 5061068      |
| MS20427M3-3 | Rivet                 | 44 Ea (44 ea) | 90-Start up Operation | FM136741-4   |
| MS21060-L3K | Nut Plate 5016886 x 7 | 22 Ea (22 ea) | 90-Start up Operation | 5024471 x 15 |
| MS9321-09   | Washer                | 25 Ea (25 ea) | 90-Start up Operation | FM136740-15  |

### Job Allocations

| Operation             | Component Part | Required | Inventory | Allocated |
|-----------------------|----------------|----------|-----------|-----------|
| 90-Start up Operation | AN3C3A         | 22       | 362       | 0         |
|                       | AN3C4A         | 3        | 1,709     | 0         |
|                       | D3256-1        | 1        | 4         | 0         |
|                       | D3256-3        | 1        | 2         | 0         |
|                       | MS20427M3-3    | 44       | 869       | 0         |
|                       | MS21060-L3K    | 22       | 56        | 0         |
|                       | MS9321-09      | 25       | 110       | 0         |

### Part Specifications

Specifications could not be found.

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |  |                                                                                                                                                                                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |
|--------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |  | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |  | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-around;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> </div> |  |  |  |
| Date : _____                                                 |  | Step #: _____                                                                                                                                                                      |  | QTY Effective : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |  |
| Description Work Order Deviation                             |  |                                                                                                                                                                                    |  | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |
|                                                              |  |                                                                                                                                                                                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |

  

| Root Cause                                  |                                                |                                                 |                                                            | FAULT CATEGORY                                 |                                               |  |  |
|---------------------------------------------|------------------------------------------------|-------------------------------------------------|------------------------------------------------------------|------------------------------------------------|-----------------------------------------------|--|--|
| Environment <input type="checkbox"/>        | No Re-verification <input type="checkbox"/>    | Pressure/Forced <input type="checkbox"/>        | Temperature/Cure <input type="checkbox"/>                  | Power Loss/Surge <input type="checkbox"/>      | Positioned Wrong <input type="checkbox"/>     |  |  |
| Design <input type="checkbox"/>             | Operator <input type="checkbox"/>              | Bending <input type="checkbox"/>                | Set-up <input type="checkbox"/>                            | Folio/Program <input type="checkbox"/>         | Outside Dimensions <input type="checkbox"/>   |  |  |
| Doc/Data <input type="checkbox"/>           | Offset/Setup <input type="checkbox"/>          | Centre Not Concentric <input type="checkbox"/>  | BOM/Route <input type="checkbox"/>                         | Grain <input type="checkbox"/>                 | Over/Under tolerance <input type="checkbox"/> |  |  |
| Equip/Tooling <input type="checkbox"/>      | Supplier <input type="checkbox"/>              | Cracks <input type="checkbox"/>                 | Broken/Damage/Defect <input type="checkbox"/>              | Weld <input type="checkbox"/>                  | Part Incorrect <input type="checkbox"/>       |  |  |
| Handling/Pre <input type="checkbox"/>       | Training <input type="checkbox"/>              | Crimp/Kink/Ripple/Wave <input type="checkbox"/> | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/>    | Part Lost/Missing <input type="checkbox"/>    |  |  |
| Material <input type="checkbox"/>           | Use for Testing <input type="checkbox"/>       | Cuffs <input type="checkbox"/>                  | Contamination <input type="checkbox"/>                     | Out of Sequence <input type="checkbox"/>       | Part Moved <input type="checkbox"/>           |  |  |
| Internal Transport <input type="checkbox"/> | Poor Information <input type="checkbox"/>      | Crushing <input type="checkbox"/>               | Countersink <input type="checkbox"/>                       | Off-set <input type="checkbox"/>               | Drawing <input type="checkbox"/>              |  |  |
| Tribal Knowledge <input type="checkbox"/>   | Rushing <input type="checkbox"/>               | Heat Treat <input type="checkbox"/>             | Cut Too Short <input type="checkbox"/>                     | Mislabeled <input type="checkbox"/>            | Finish <input type="checkbox"/>               |  |  |
| LOA <input type="checkbox"/>                | Product Improvement <input type="checkbox"/>   | Wave/Twist in Tube <input type="checkbox"/>     | Instructions Incomplete/Unclear <input type="checkbox"/>   | Fit/Function <input type="checkbox"/>          | Misread <input type="checkbox"/>              |  |  |
| Substation <input type="checkbox"/>         | Process Improvement <input type="checkbox"/>   | Marks/Chatter <input type="checkbox"/>          | Drill Holes <input type="checkbox"/>                       | Misaligned/off center <input type="checkbox"/> | Turning Sequence <input type="checkbox"/>     |  |  |
| Past Expiry Date <input type="checkbox"/>   | Manufacturing Process <input type="checkbox"/> | OTHER : _____                                   |                                                            |                                                |                                               |  |  |
| Misidentified <input type="checkbox"/>      | Past Due <input type="checkbox"/>              |                                                 |                                                            |                                                |                                               |  |  |

Water Jet ☐ Engineering ☐  
 Inspector: \_\_\_\_\_ Quality ☐  
 Revision: \_\_\_\_\_ ther ☐  
 Exp Date: \_\_\_\_\_  
 Instructions: \_\_\_\_\_  
 Part: D412 - 705 - 015  
 Job No: 178727  
 Serial No/Batch: S082142  
 Container No: S082142  
 Date: 06/9/18  
 DART AEROSPACE  
 1270 Aberdeen Street  
 Hawkesbury, ON K6A 1K7  
 CANADA  
 TEL: 1 819 822-5200  
 Email: sales@dartaero.com  
 www.dartaerospace.com  
 Approval \_\_\_\_\_  
 By \_\_\_\_\_  
 Supervisor/Verification \_\_\_\_\_  
 Coordinator Approval \_\_\_\_\_





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## Container View (Active) - Master Unit Containers

| Master Unit No | Container No | Part No     | Part Name    | From Container | Current Location | Quantity |
|----------------|--------------|-------------|--------------|----------------|------------------|----------|
| 003818         | S080212      | AN3C3A      | Bolt         | S019392        | ST350            | 22       |
| 003818         | S080213      | AN3C4A      | Bolt         | S000533        | ST350            | 3        |
| 003818         | S082141      | D3256-1     | Access Panel | S064811        | ST486            | 1        |
| 003818         | S080214      | D3256-3     | Gasket       | S061068        | ST486            | 1        |
| 003818         | S080210      | MS20427M3-3 | Rivet        | fm136741-4     | ST311            | 44       |
| 003818         | S024471      | MS21060-L3K | Nut Plate    |                | ST300            | 15       |
| 003818         | S080207      | MS21060-L3K | Nut Plate    | S016886        | GA012            | 7        |
| 003818         | S080195      | MS9321-09   | Washer       | fm136740-15    | ST267            | 25       |

Note: Ad hoc query view of Part.dbo.Container where Container.Active = 1.

Plex 6/19/18 7:45 AM dart.quirion.sonia

## 5.0 PARTS LIST

| Qty<br>-011 | Qty<br>-013 | Qty<br>-015 | Qty<br>-017 | Qty<br>-019 | Qty<br>-021 | Qty<br>-023 | Part Number  | Description                                  |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|----------------------------------------------|
| X           |             |             |             |             |             |             | D412-705-011 | TWIN PAK E-Z ACCESS KIT                      |
| 1           | X           |             |             |             |             |             | D412-705-013 | INTAKE PLENUM ACCESS PANEL KIT               |
| 1           |             | X           |             |             |             |             | D412-705-015 | DRIVESHAFT TUNNEL MODIFICATION KIT           |
| 1           |             |             | X           |             |             |             | D412-705-017 | N1 GEARBOX ACCESS PANEL KIT                  |
| 1           |             |             |             | X           |             |             | D412-705-019 | C-BOX OIL COOLER LINE SUPPORT ACCESS KIT     |
| 1           |             |             |             |             | X           |             | D412-705-021 | OIL PRESSURE TRANSMITTER ACCESS KIT          |
| 1           |             |             |             |             |             | X           | D412-705-023 | OIL COOLER SUPPORT REMOVABLE LOWER PANEL KIT |
|             | 1           |             |             |             |             |             | D3245-041    | ACCESS PANEL ASSEMBLY, LH                    |
|             | 1           |             |             |             |             |             | D3245-042    | ACCESS PANEL ASSEMBLY, RH                    |
|             | 2           |             |             |             |             |             | D3245-043    | DOOR ASSEMBLY                                |
|             | 2           |             |             |             |             |             | D3245-9      | GASKET                                       |
|             | 2           |             |             |             |             |             | D3245-11     | GASKET                                       |
|             | 2           |             |             |             |             |             | D3245-13     | GASKET                                       |
|             |             |             | 1           |             |             |             | D3255-041    | ACCESS PANEL ASSEMBLY, LH                    |
|             |             |             | 1           |             |             |             | D3255-042    | ACCESS PANEL ASSEMBLY, RH                    |
|             |             | 1           |             |             |             |             | D3256-1      | ACCESS PANEL                                 |
|             |             | 1           |             |             |             |             | D3256-3      | GASKET                                       |
|             |             |             |             | 1           |             |             | D3259-041    | ACCESS PANEL ASSEMBLY, LH                    |
|             |             |             |             | 1           |             |             | D3259-042    | ACCESS PANEL ASSEMBLY, RH                    |
|             |             |             |             |             | 1           |             | D3307-041    | ACCESS PANEL ASSEMBLY                        |
|             |             |             |             |             |             | 30          | AN3-3A       | BOLT                                         |
|             |             | 22          | 30          |             | 6           |             | AN3C3A       | BOLT                                         |
|             |             | 3           |             |             |             |             | AN3C4A       | BOLT                                         |
|             |             |             |             |             |             | 30          | AN960JD10    | WASHER                                       |
| 16          | 44          | 36          |             |             | 12          |             | MS20427M3-3  | * RIVET                                      |
|             |             |             |             |             |             | 4           | MS21051-L3K  | NUT PLATE                                    |
| 8           | 22          | 18          |             |             | 6           |             | MS21060-L3K  | NUT PLATE                                    |
|             |             |             |             |             |             | 18          | MS21069-L3K  | NUT PLATE                                    |
|             |             | 25          | 30          |             | 6           |             | MS9321-09    | WASHER                                       |

\* Acceptable to substitute for MS20615M3-3 rivets. At installation, it is acceptable to use longer rivets if required.